

We claim:

Sum 6 427

1. A container comprising:
  - a body having an interior, an exterior, a sidewall and a top opening;
  - a lid having a first end hingedly connected to said body and a second end, said lid
  - 5 being shiftable between a closed position covering said top opening and an open position allowing access to the interior;
  - a fastener for holding said lid in said closed position; and
  - a gravity-operated actuator for positively shifting said fastener between a securing and a releasing position;
  - 10 wherein said gravity-operated actuator comprises:
    - a weight mounted on said body exterior for bi-stable movement between a first position and a second position with respect to said sidewall; and
    - a rigid link connecting said weight to said fastener;
  - whereby said fastener is shifted from said securing position to said releasing
  - 15 position when said weight shifts from said first position to said second position.
2. The container of claim 1 wherein said sidewall includes a fastener support, and said fastener comprises a latch pivotally mounted on said fastener support and having a first end comprising a hook and a second end.
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3. The container of claim 2 wherein said link is attached to said fastener at said second end.

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4. The container of claim 3 wherein said lid includes a projection engagable by said hook.

5. The container of claim 1 wherein said weight has a body portion and a head portion connected to said body portion and is pivotally mounted for rotation about a pivot point on said body portion spaced apart from said head portion.

6. The container of claim 5 wherein said container includes first and second stops on said side wall for limiting pivotal movement of said weight.

7. The container of claim 6 wherein said rigid link is pivotally connected to said weight body portion.

8. The container of claim 1 wherein said top opening lies in a plane and wherein said fastener remains in said securing position until the plane of said top opening is generally vertical.

9. The container of claim 1 wherein said weight is pivotally mounted on said sidewall and includes a pivot point.

10. The container of claim 9 wherein said weight includes a narrow end and a wide end and said pivot point is located on said narrow end.

11. The container of claim 10 wherein said rigid link is connected to said weight near said narrow end.

12. The container of claim 2 wherein said rigid link is pivotally connected to said latch second end.

13. A container adapted to be moved from a rest orientation to a dump orientation during a dumping operation comprising:

a body having an interior and a top opening into said interior;

10 a lid having a first end hingedly connected to said body and shiftable between a closed position covering said top opening and an open position allowing access to the interior;

said container having a first angular orientation with respect to the ground when said container is in a rest orientation and a second angular orientation with respect to the ground when said container is in said dump orientation;

15 a fastener for holding said lid in said closed position and substantially preventing movement of said lid when pressure is applied against said lid from said interior;

and an actuator for positively shifting said fastener between a securing and a releasing position;

20 wherein said actuator comprises:

a weight pivotably mounted on said body for movement to a first position with respect to said sidewall when said container has a first angular orientation with respect to

the ground and to a second position with respect to said sidewall when said container has a second angular orientation with respect to the ground;

and a link rigidly connected between said weight and said fastener for transferring substantially all motion of said weight to said fastener.

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14. The container of claim 13 wherein said weight shifts from said first position to said second position when said container assumes a third angular orientation with respect to the ground.

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15. the container of claim 13 wherein said weight shifts from said second position to said first position when said container assumes a fourth angular orientation with respect to the ground.

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16. The container of claim 15 wherein said fourth angular orientation is between said first angular orientation and said third angular orientation.

17. The container of claim 14 wherein said third angular orientation is greater than or equal to 90 degrees.

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18. The container of claim 13 wherein said weight is bi-stably mounted on said container.

19. A method of latching and unlatching a container by changing the orientation of the container with respect to the ground comprising the steps of:

providing a container having a lid;

providing a fastener shiftable between a first position for securing said lid to said container and a second position for releasing said lid;

mounting a weight on said container to pivot bi-stably between first and second positions in response to changes in the orientation of said container;

positively coupling said weight to said fastener;

pivoting said container in a first direction until said weight shifts to said second position; and

pivoting said container from said second position to said first position until said weight shifts to said first position.

20. A gravity-operated actuator for shifting a container lid latch between a latching position and an unlatching position, said actuator comprising

a weight mountable on the exterior of a container for bi-stable movement between a first position and a second position with respect to the container; and

a rigid link connecting said weight to the container lid latch;

whereby said fastener is shifted from said latching position to said unlatching position when said weight shifts from said first position to said second position

21. The actuator of claim 20 wherein said weight has a body portion and a head portion connected to said body portion and is pivotally mounted for rotation about a pivot point on said body portion spaced apart from said head portion.

22. The container of claim 20 wherein said weight includes a narrow end and a wide end and said pivot point is located on said narrow end.

5        23. The container of claim 22 wherein said rigid link is connected to said weight near said narrow end.

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